

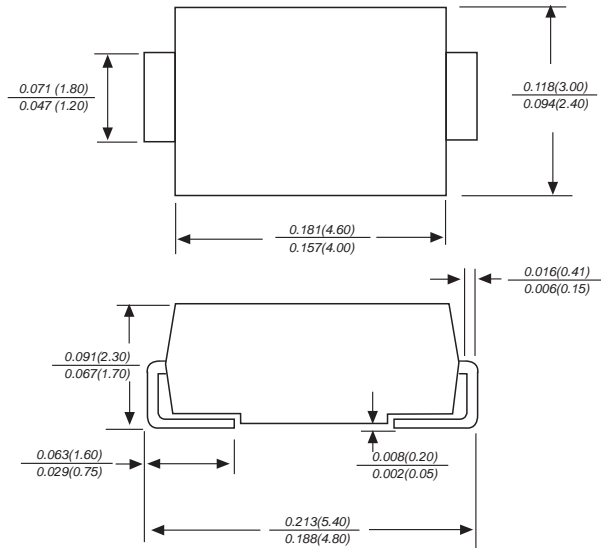
SZ252D THRU SZ25D0

SURFACE MOUNT SILICON ZENER DIODES

V_Z : 2.4 - 200 Volts

P_D : 1.3 Watts

DO-214AC



Dimensions in inches and (millimeters)

Features

- ◆ Glass passivated chip
- ◆ Low leakage
- ◆ Built-in strain relief
- ◆ Low inductance
- ◆ High peak reverse power dissipation
- ◆ Lead (Pb)-free component
- ◆ For use in stabilizing and clipping with high power rating

Mechanical Data

Case: Molded plastic

Epoxy: UL 94V-0 rate flame retardant

Lead: Solderable per MIL-STD-750, method 2026

Polarity: Color band denotes cathode end

Mounting position: Any

Weight: 0.0032 ounce, 0.092 gram

DEVICES FOR BIDIRECTIONAL APPLICATIONS

Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	UNIT
DC power dissipation at $T_L = 50^\circ\text{C}^{(1)}$	P_D	1.3	W
Maximum forward voltage at $I_F = 200\text{ mA}$	V_F	1.0	V
Maximum thermal resistance junction to ambient air ⁽²⁾	$R_{\theta JA}$	170	K/W
Junction temperature range	T_J	- 55 to + 150	$^\circ\text{C}$
Storage temperature range	T_{STG}	- 55 to + 150	$^\circ\text{C}$

Note:

(1) T_L = Lead temperature at 3/8 " (9.5mm) from body

(2) Valid provided that leads are kept at ambient temperature at a distance of 10 mm from case

ELECTRICAL CHARACTERISTICS (at T_A=25°C unless otherwise noted)

TYPE	Nominal Zener Voltage		Maximum Zener Impedance			Maximum Reverse Leakage Current		Maximum DC Zener Current
	V _Z @ I _{ZT}	I _{ZT}	Z _{ZT} @ I _{ZT}	Z _{ZK} @ I _{ZK}	I _{ZK}	I _R @ V _R		I _{ZM}
	(V)	(mA)	(Ω)	(Ω)	(mA)	(μA)	(V)	(mA)
SZ252D	2.4	80	20	400	1.0	150	1.0	410
SZ252H	2.7	80	20	400	1.0	150	1.0	370
SZ253A	3.0	80	20	400	1.0	100	1.0	340
SZ253D	3.3	80	20	400	1.0	50	1.0	320
SZ253G	3.6	70	20	500	1.0	50	1.0	290
SZ253J	3.9	60	15	500	1.0	50	1.0	280
SZ254D	4.3	50	13	500	1.0	50	1.0	250
SZ254H	4.7	45	13	500	1.0	50	1.0	215
SZ255B	5.1	45	10	500	1.0	50	1.5	200
SZ255G	5.6	45	7.0	400	1.0	50	2.0	190
SZ256C	6.2	35	4.0	300	1.0	50	3.0	170
SZ256I	6.8	35	3.5	300	1.0	50	4.0	155
SZ257F	7.5	35	3.0	200	0.5	50	4.5	140
SZ258C	8.2	25	5.0	200	0.5	50	6.2	130
SZ259B	9.1	25	5.0	200	0.5	50	6.8	120
SZ2510	10	25	7.0	200	0.5	50	7.5	105
SZ2511	11	20	8.0	300	0.5	50	8.2	97
SZ2512	12	20	9.0	350	0.5	0.5	9.1	88
SZ2513	13	20	10	400	0.5	0.5	10	79
SZ2515	15	15	15	500	0.5	0.5	11	71
SZ2516	16	15	15	500	0.5	0.5	12	66
SZ2518	18	15	20	500	0.5	0.5	13	62
SZ2520	20	10	24	600	0.5	0.5	15	56
SZ2522	22	10	25	600	0.5	0.5	16	52
SZ2524	24	10	25	600	0.5	0.5	18	47
SZ2527	27	8.0	30	750	0.25	0.5	20	41
SZ2530	30	8.0	30	1000	0.25	0.5	22	36
SZ2533	33	8.0	35	1000	0.25	0.5	24	33
SZ2536	36	8.0	40	1000	0.25	0.5	27	30
SZ2539	39	6.0	50	1000	0.25	0.5	30	28
SZ2543	43	6.0	50	1000	0.25	0.5	33	26
SZ2547	47	4.0	90	1500	0.25	0.5	36	23
SZ2551	51	4.0	115	1500	0.25	0.5	39	21
SZ2556	56	4.0	120	2000	0.25	0.5	43	19
SZ2562	62	4.0	125	2000	0.25	0.5	47	16
SZ2568	68	4.0	130	2000	0.25	0.5	51	15
SZ2575	75	4.0	135	2000	0.25	0.5	56	14
SZ2582	82	2.7	200	3000	0.25	0.5	62	12
SZ2591	91	2.7	250	3000	0.25	0.5	68	10
SZ25B0	100	2.7	350	3000	0.25	0.5	75	9.4
SZ25B1	110	2.7	450	4000	0.25	0.5	82	8.6
SZ25B2	120	2.0	550	4500	0.25	0.5	91	7.8
SZ25B3	130	2.0	700	5000	0.25	0.5	100	7.0
SZ25B5	150	2.0	1000	6000	0.25	0.5	110	6.4
SZ25B6	160	1.5	1100	6500	0.25	0.5	120	5.8
SZ25B8	180	1.5	1200	7000	0.25	0.5	130	5.2
SZ25D0	200	1.5	1500	8000	0.25	0.5	150	4.7

Notes :

- (1) The type number listed have a standard tolerance on the nominal zener voltage of $\pm 5\%$
- (2) The reverse surge current is a non-repetitive, 8.3ms pulse width square wave or equivalent sine-wave superimposed on I_{ZT} per JEDEC

RATINGS AND CHARACTERISTIC CURVES SZ252D THRU SZ25D0

Ratings and Characteristics Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

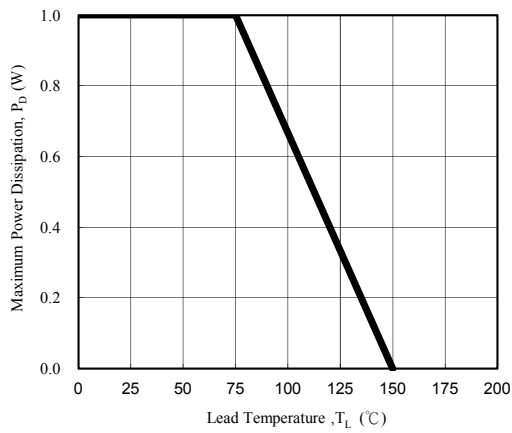


Fig. 1 - Power Temperature Derating Curve

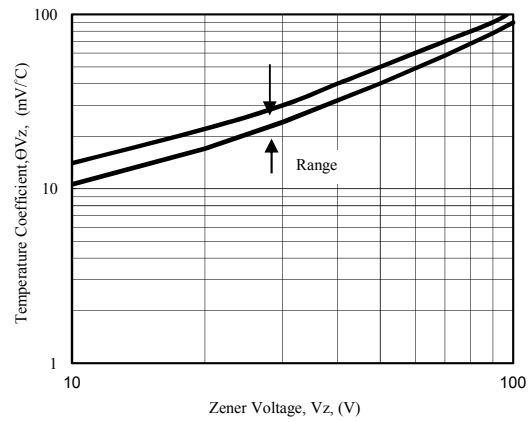


Fig. 2 - Temperature Coefficients v.s. Zener Voltage

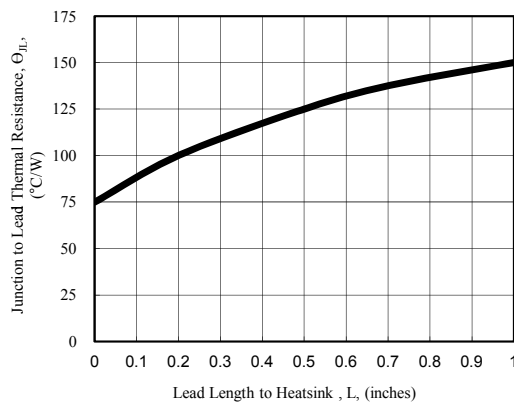


Fig. 3 - Typical Thermal Resistance v.s. Lead Length

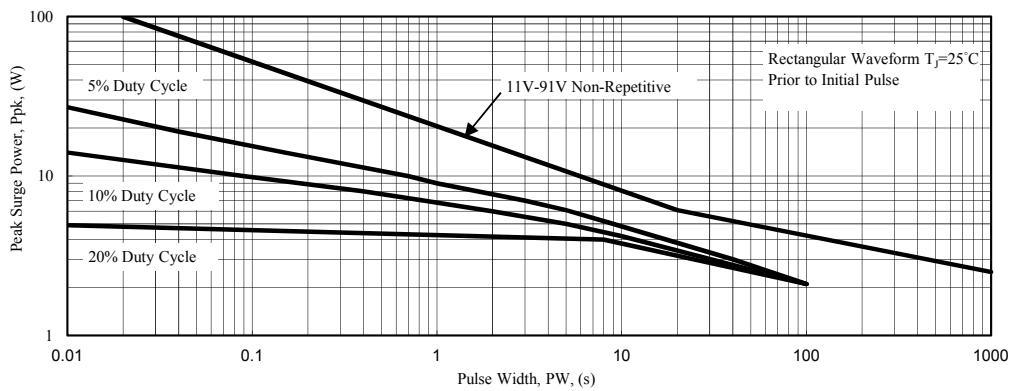


Fig. 4 - Maximum Surge Power